
DEPARTMENT OF THE INTERIOR
Fish and Wildlife Service
50 CFR Part 17
Endangered and Threatened Wildlife and Plants; Proposed Endangered Status for *Crescentia portoricensis*

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: The Service proposes to determine *Crescentia portoricensis* (Higuero de Sierra) to be an endangered species pursuant to the Endangered Species Act (Act) of 1973, as amended. Critical habitat is not proposed. *Crescentia portoricensis* is endemic to evergreen, semievergreen, and deciduous forests on serpentine in the lower Cordillera region of

southwestern Puerto Rico. This small tree is threatened by the direct and indirect effects of deforestation, and its extremely low population size. This proposal, if made final, would implement the Federal protection and recovery provisions afforded by the Act for *Crescentia portoricensis*. The Service seeks data and comments from the public on this proposal.

DATES: Comments from all interested parties must be received by March 16, 1987. Public hearing requests must be received by March 2, 1987.

ADDRESSES: Comments and materials concerning this proposal should be sent to the Field Supervisor, Caribbean Field Office, U.S. Fish and Wildlife Service, P.O. Box 491, Boqueron, Puerto Rico 00622. Comments and materials received will be available for public inspection, by appointment, at this office during normal business hours, and at the Service's Southeast Regional Office, Suite 1282, 75 Spring Street SW., Atlanta, Georgia 30303.

FOR FURTHER INFORMATION CONTACT: Mr. David Densmore at the Caribbean Field Office address (809/851-7297) or Mr. Richard P. Ingram at the Atlanta Regional Office address (404/331-3583 or FTS 242-3583).

SUPPLEMENTARY INFORMATION:

Background

Crescentia portoricensis was discovered by N.L. Britton in 1913 along the Maricao River in western Puerto Rico. A small population of the species was later found approximately 10 miles (16 kilometers) to the southeast in the Susua area. Prior to 1979, the species was known from two small populations in Maricao Commonwealth Forest and a third in Susua Commonwealth Forest, each population consisting of about six plants. The two Maricao populations were not found during 1979 searches (Vivaldi and Woodbury 1981), and repeated searches of these sites have failed to locate the plants. However, a population of 23 individuals has recently been discovered in the Maricao area by Commonwealth Forest personnel. Thus, a total of 29 plants are now known from two sites.

Crescentia portoricensis is an evergreen vinelike shrub or small tree reaching 20 feet (6 meters) in height, with a trunk diameter of 3 inches (8 centimeters). The leaves are simple, oblanceolate to narrowly elliptic, shiny dark green and leathery, and usually clustered at the nodes. The yellowish-white flowers are tubular and irregularly bell-shaped, the fruits cylindric, hard, and dry. The species is endemic to the

montane and lower montane mixed evergreen, semievergreen, and deciduous forests of the lower Cordillera of southwest Puerto Rico. Much of this region is underlain by serpentine, which appears as outcrops or serpentaceous soils, and contributes to its high floristic diversity and endemism. Within the two Commonwealth Forest units where it occurs, *Crescentia portoricensis* is restricted to sites along permanent or intermittent watercourses.

Deforestation has had a significant effect on the native flora of Puerto Rico, particularly at lower elevations. The lands presently within Susua Commonwealth Forest, entirely below 1550 feet (475 meters), were deforested by the beginning of this century. Although the lands at higher elevations (up to 2880 feet or 875 meters) in Maricao Commonwealth Forest have largely escaped such extreme alteration, both Maricao and Susua have continued to be affected indirectly by deforestation of adjacent lands and the increased incidence of erosion, landslides, and flash flooding. Since it occupies stream and valley bottom habitats, *Crescentia portoricensis* has been particularly vulnerable to these latter impacts. It is believed that the two previously known Maricao populations were lost to flooding and the resulting erosion of their habitat.

Crescentia portoricensis was recommended for Federal listing by the Smithsonian Institution (Ayensu and DeFilipps 1978). The species was included among the plants being considered for endangered or threatened status by the Fish and Wildlife Service, as identified in the notice published in the December 15, 1980, **Federal Register** (45 FR 82480). The species was placed in category 1 (species for which the Service has substantial information supporting the appropriateness of proposing to list them as endangered or threatened) and was retained in category 1 in the September 27, 1985, revised notice (50 FR 39526).

In a notice published in the **Federal Register** on February 15, 1983 (48 FR 6752), the Service reported the earlier acceptance of the new taxa in the Smithsonian's 1978 book as under petition within the content of section 4(b)(3)(A) of the Act, as amended in 1982. The Service subsequently found on October 13, 1983, October 12, 1984, and October 11, 1985, that listing *Crescentia portoricensis* was warranted but precluded by other pending listing actions, in accordance with section 4(b)(3)(B)(iii) of the Act. This proposed rule indicates that the petitioned action is warranted and constitutes the next

required finding in accordance with section 4(b)(3)(B)(ii) of the Act.

Summary of Factors Affecting the Species

Section 4(a)(1) of the Endangered Species Act (16 U.S.C. 1531 *et seq.*) and regulations (50 CFR Part 424) promulgated to implement the listing provisions of the Act set forth the procedures for adding species to the Federal Lists. A species may be determined to be an endangered or threatened species due to one or more of the five factors described in section 4(a)(1). These factors and their application to *Crescentia portoricensis* Britton (Higuero de Sierra) are as follows:

A. The Present or Threatened Destruction, Modification, or Curtailment of its Habitat or Range

Deforestation and its indirect impacts pose serious threats to this species. Associated erosion or landslides caused by accelerated runoff and flash flooding appear to be the most serious threats to *Crescentia portoricensis*. Although the surviving populations exist within units of the Commonwealth Forest system, the deforestation of surrounding lands continues to affect the species and its habitat. In addition, flood control projects that include large reservoirs in the mountains of the Maricao area have been proposed by the U.S. Army Corps of Engineers. If these are constructed, impoundments could extend into drainages where the species occurs.

B. Overutilization for Commercial, Recreational, Scientific, or Educational Purposes

Species of the genus *Crescentia* (calabash) are widely cultivated throughout the Old and New World tropics. Over-collection could prove a serious problem for this species, since only 29 individuals are known to exist in the wild.

C. Disease or Predation

Disease and predation have not been documented as factors in the decline of this species.

D. The Inadequacy of Existing Regulatory Mechanisms

The Commonwealth of Puerto Rico has recently adopted a regulation that recognizes and provides protection for certain Commonwealth listed species. However, *Crescentia portoricensis* is not yet on the Commonwealth list. Federal listing would provide the Act's recovery and protection provisions to this small tree.

E. Other Natural or Manmade Factors Affecting its Continued Existence

The known populations of *Crescentia portoricensis* are confined to geographically small areas and thus are susceptible to a variety of natural disturbances, such as major storms and resulting landslides or flooding. Although the species is probably adapted to survive such events, these natural threats are exacerbated by the manmade conditions outlined in threat factor "A" above. In addition, with fewer than 30 plants known to exist, and no seedlings ever observed, this species is very vulnerable to total extirpation.

The Service has carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by this species in determining to propose this rule. Based on this evaluation, the preferred action is to list *Crescentia portoricensis* as endangered. Since there are few individuals remaining and a continuing risk of damage to the plants and/or their habitat exists, endangered status seems an accurate assessment of the species' condition. The reasons for not proposing critical habitat for this species are discussed below in the "Critical Habitat" section.

Critical Habitat

Section 4(a)(3) of the Act, as amended, requires that to the maximum extent prudent and determinable, the Secretary designate any habitat of a species which is considered to be critical habitat at the time the species is determined to be endangered or threatened. The Service finds that designation of critical habitat is not prudent for this species at this time. The distribution of *Crescentia portoricensis* is sufficiently restricted that collecting or vandalism could seriously damage or eliminate the remaining populations of the species. Publication of critical habitat descriptions and maps in the **Federal Register** would increase the likelihood of such activities. The Service believes that Federal involvement in the areas where this plant occurs can be identified without the designation of critical habitat. All involved parties and landowners will be notified of the location and importance of protecting this species' habitat. Protection of this species' habitat will be addressed through the recovery process and through the section 7 jeopardy standard. Therefore, it would not be prudent to determine critical habitat for the species at this time.

Available Conservation Measures.

Conservation measures provided to species listed as endangered or threatened under the Endangered Species Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing encourages and results in conservation actions by Federal, Commonwealth, and private agencies, groups, and individuals. The Endangered Species Act provides for possible land acquisition and cooperation with the Commonwealth and requires that recovery actions be carried out for all listed species. Such actions are initiated by the Service following listing. The protection required of Federal agencies and the prohibitions against taking are discussed, in part, below.

Section 7(a) of the Act, as amended, requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened and with respect to its critical habitat, if any is being designated. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR Part 402 (see revision at 51 FR 19926; June 3, 1986). Section 7(a)(4) requires Federal agencies to confer informally with the Service on any action that is likely to jeopardize the continued existence of a proposed species or result in destruction or adverse modification of proposed critical habitat. If a species is listed subsequently, section 7(a)(2) requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of such a species or to destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency must enter into formal consultation with the Service. No critical habitat is being proposed for *Crescentia portoricensis*, as discussed above. Federal involvement is expected only if flood control projects are proposed by the U.S. Army Corps of Engineers.

The Act and its implementing regulations found at 50 CFR 17.61, 17.62, and 17.63 set forth a series of general trade prohibitions and exceptions that apply to all endangered plants. All trade prohibitions of section 9(a)(2) of the Act, implemented by 50 CFR 17.61, apply. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the United States to

import or export an endangered plant, transport it in interstate or foreign commerce in the course of a commercial activity, sell or offer it for sale in interstate or foreign commerce, or remove it from areas under Federal jurisdiction and reduce it to possession. Certain exceptions can apply to agents of the Service and Commonwealth conservation agencies. The Act and 50 CFR 17.62 and 17.63 also provide for the issuance of permits to carry out otherwise prohibited activities involving endangered species under certain circumstances. Although there may be some horticultural interest in *Crescentia portoricensis*, it is anticipated that few trade permits would ever be sought or issued since the species is not known to be in cultivation and is uncommon in the wild. Requests for copies of the regulations on plants and inquiries regarding them may be addressed to the Federal Wildlife Permit Office, U.S. Fish and Wildlife Service, Washington, DC 20240 (703/235-1903).

Public Comments Solicited

The Service intends that any final action resulting from this proposal will be as accurate and as effective as possible. Therefore, any comments or suggestions from the public, other concerned governmental agencies, the scientific community, industry, or any other interested party concerning any aspect of this proposed rule are hereby solicited. Comments particularly are sought concerning:

- (1) Biological, commercial trade, or other relevant data concerning any threat (or lack thereof) to *Crescentia portoricensis*;
- (2) The location of any additional populations of *Crescentia portoricensis*, and the reasons why any habitat should or should not be determined to be critical habitat as provided by section 4 of the Act;
- (3) Additional information concerning the range and distribution of this species; and
- (4) Current or planned activities in the subject areas and their possible impacts on *Crescentia portoricensis*.

Final promulgation of the regulation on *Crescentia portoricensis* will take into consideration the comments and any additional information received by the Service, and such communications may lead to adoption of a final regulation that differs from this proposal.

The Endangered Species Act provides for a public hearing on this proposal, if requested. Requests must be filed within

45 days of the date of the proposal. Such requests must be made in writing and addressed to the Field Supervisor, Caribbean Field Office, U.S. Fish and Wildlife Service, P.O. Box 491, Boqueron, Puerto Rico 00622.

National Environmental Policy Act

The Fish and Wildlife Service has determined that an Environmental Assessment, as defined under the authority of the National Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to section 4(a) of the Endangered Species Act of 1973, as amended. A notice outlining the reasons for this determination was published in the Federal Register on October 25, 1983 (48 FR 49244).

References Cited

- Ayensu, E.S., and R.A. DeFilipps*. 1978. Endangered and Threatened Plants of the United States. Smithsonian Institution and World Wildlife Fund Inc., Washington, D.C. xv 403 pp.
- Vivaldi, J.L., and R.O. Woodbury*. 1981. Status report on *Crescentia portoricensis* Britton. Unpublished status report submitted to the U.S. Fish and Wildlife Service, Atlanta, Georgia. 28 pp.

Author

The primary author of this proposed rule is Mr. David Densmore, Caribbean Field Office, U.S. Fish and Wildlife Service, P.O. Box 491, Boqueron, Puerto Rico 00622 (809/851-7297).

List of Subjects in 50 CFR Part 17

Endangered and threatened wildlife, Fish, Marine mammals, Plants (agriculture).

Proposed Regulation Promulgation**PART 17—[AMENDED]**

Accordingly, it is hereby proposed to amend Part 17, Subchapter B of Chapter I, Title 50 of the Code of Federal Regulations, as set forth below:

1. The authority citation for Part 17 continues to read as follows:

Authority: Pub. L. 93-205, 87 Stat. 884; Pub. L. 94-359, 90 Stat. 911; Pub. L. 95-632, 92 Stat. 3751; Pub. L. 96-159, 93 Stat. 1225; Pub. L. 97-304, 96 Stat. 1411 (16 U.S.C. 1531 *et seq.*).

2. It is proposed to amend § 17.12(h) by adding the following, in alphabetical order under Bignoniaceae, to the List of Endangered and Threatened Plants:

§ 17.12 Endangered and threatened plants.

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(h) * * *

Species		Historic range	Status	When listed	Critical habitat	Special rules
Scientific name	Common name					
Bignoniaceae—Bignonia family:						
<i>Crescentia portoricensis</i>	Higuero de Sierra	U.S.A. (PR)	E		NA	NA

Dated: November 28, 1986.

P. Daniel Smith,

Acting Assistant Secretary for Fish and
Wildlife and Parks.

[FR Doc. 87-783 Filed 1-13-87; 8:45 am]

BILLING CODE 4310-55-M